GEOLOGICAL, GEOPHYSICAL AND GEOCHEMICAL

REPORT ON THE FOTO GROUP
TINTINA-ANVIL PROJECT

Whitehorse Mining District
Yukon Territory

Latitude: 62°15' N

Longitude: 132°44' W

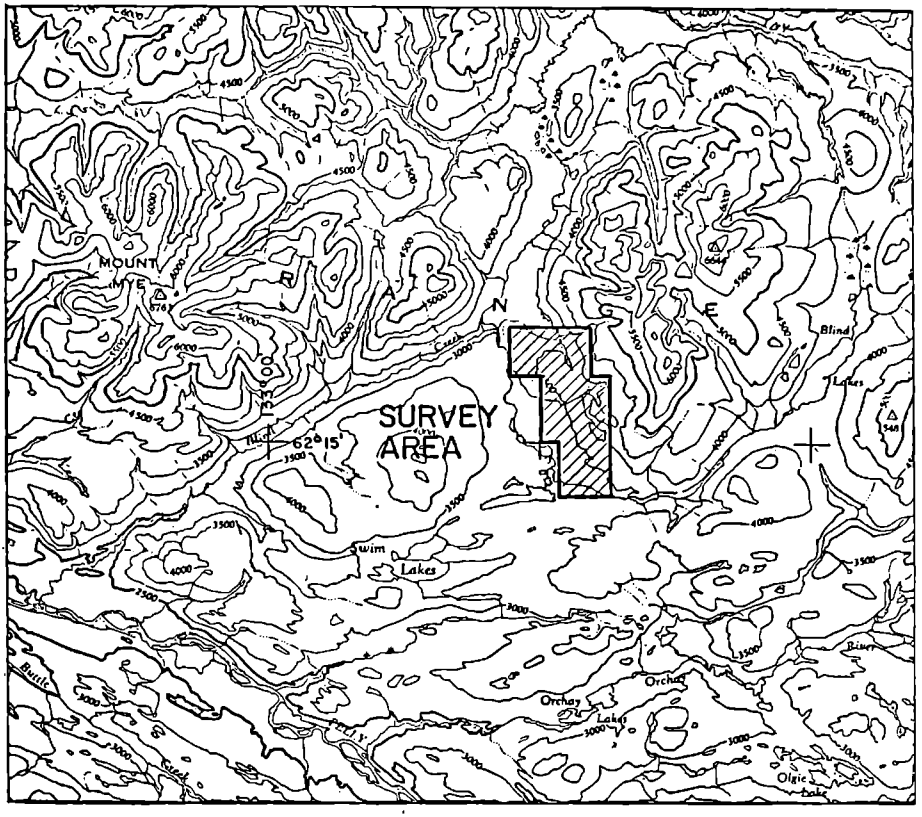
N.T.S. 105-K-2
105-K-7

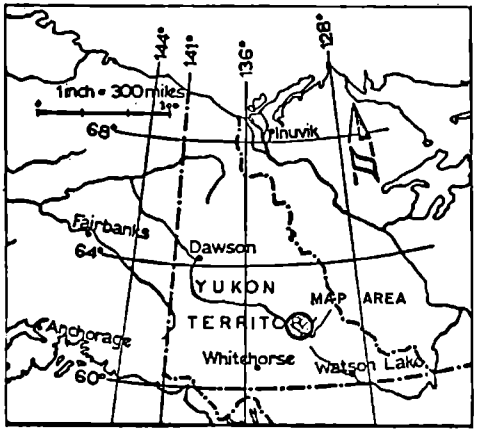
By:

Wayne J. Roberts

DYNASTY EXPLORATIONS LIMITED

April 1 December 31, 1972





DYNASTY EXPLORATIONS LTD.

LOCATION MAP

FOTO GROUP

FARO AREA, YUKON TERRITORY

SCALE 1 250,000

4miles 0 4miles

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LIST OF ILLUSTRATIONS

LIST OF CLAIMS

Claim	Grant Number	Recording Date
FOTO 1-200	Y66390-Y66589	June 9, 1972
FOTO 201-216	Y67061-Y67076	August 29, 1972
FOTO 217-224	Y67238-Y67245	September 27, 1972

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GEOLOGICAL, GEOPHYSICAL AND GEOCHEMICAL REPORT ON THE FOTO GROUP TINTINA-ANVIL PROJECT

INTRODUCTION

Regional geological mapping in the Swim Lakes area during the 1971 season outlined an area of quartz-rich phyllite, the host for massive sulphide deposits in the Anvil area. A favourable geologic environment within which airborne electromagnetic and magnetic anomalies had been located defined a priority area for massive sulphide exploration. Within this region, Dynasty Explorations staked the 200 claim Foto Group.

During the 1972 field season 80 miles of picket-line were hand cut, followed by soil sampling, grid geology, deep penetrating E.M. (Turam), ground magnetometer and gravimetric surveys. Late in the season 24 more claims were staked to ensure better protection around geophysical anomalies.

Proposed work for the 1973 field season includes limited additional geological mapping and geophysical survey coverage. Emphasis will be placed on diamond drilling, gravity-Turam geophysical anomalies within a belt of quartz-rich phyllite rock.

LOCATION AND ACCESS

The Foto Group is centred at longitude 132°44' W and latitude 62°15' N, approximately 2 miles northeast of Cub Lake, in the Anvil Range, east-central Yukon. Access to the property

may be gained by helicopter from Faro, 20 miles to the southwest or Ross River, some 20 miles to the southeast. Access may also be made by float-equipped aircraft based from Ross River, as well as 4-wheel drive and bombardier roads from Faro.

REGIONAL GEOLOGY

The Anvil Range, located in the eastern portion of the Selwyn Basin, northeast of the Tintina Trench, consists of a 20-mile wide by 50-mile long belt of Proterozoic and Paleozoic strata. This succession of strata, dominated by Cambrian to Eocambrian quartz mica schist and phyllite, forms the Anvil Arch, a northwest-trending asymmetric antiform with an elongate intrusive, the Anvil Batholith, in the core. In the southeast portion of the district, the amplitude of the Anvil Arch diminishes resulting in a shallow broad basin. A simplified geologic section consists of quartz mica schist and calc-silicates overlain by phyllite which, in turn, is unconformably overlain by late Paleozoic volcanics and sediments. Structurally, this area has had a complex history of at least five deformations during regional metamorphism. Major faults are oriented in a northeast direction, as well as a northwest direction, parallel to the Tintina Trench. The Tintina Fault system, at least 600 miles long, is a zone of major transcurrent faulting on which about 250 miles of right lateral displacement has been postulated (Templeman-Kluit, G.S.C.).

The known major massive sulphide deposits occur at the same stratigraphic level within the phyllite unit. Increasing regional metamorphic grade to the N.W. is paralleled by a corresponding increase in sulphide grain size. Pyrrhotite content also increases with metamorphism. An elongation of deposits paralleling deformational fabrics adds evidence to the fact that the sulphides were affected during regional metamorphism.

The three major massive sulphide deposits are thought to be of syngenetic origin as indicated by stratigraphy, similar average metal content, uniform lead-zinc ratios, similar textures and mineralogy.

TABLE OF GEOLOGIC FORMATIONS

Age	Unit	Description
CRETACEOUS	11	"Anvil Batholith" - medium grey weathering, equigranular but locally porphyritic and foliated, hypidiomorphic medium grained biotite quartz monzonite to granodiorite.
	3d	"Greenstone" - light to dark green foliated to massive chlorite schist to andesite to amphibolite.
EOCAMBRIAN	3b	Silvery grey weathering, light grey to black sericite, biotite, graphite phyllite.
	3a	Light grey to black quartz sericite, biotite, chlorite, phyllite. Also includes quartz graphite phyllite (3ag) and quartzite (3aq).
	2d	Tan weathering medium to coarse grained quartz biotite, sericite, andalusite, granet, staurolite schist.

GEOLOGY

During 1970 and 1971 Dynasty undertook a large program of data compilation, regional mapping and property acquisition in the Anvil Range. All previous geochemical, geological, geophysical and diamond drilling results from both Dynasty's and Anvil's previous exploration programs were compiled on 1:1320 scale to serve as base maps for further detailed exploration. Work by Templeman-Kluit of the G.S.C. provided a good regional

geological base. Geological mapping was initiated around the Faro deposits, followed by regional mapping of the south limb of the Anvil Arch, the Vangorda deposit and the Swim Lakes area. The purpose of continued detailed mapping was to determine which stratigraphic levels, if any, of the phyllite were host to major sulphide deposits and which structures, if any, might control ore deposition. These guides were then used to evaluate further potential areas in the Anvil area. The Foto Group was staked over airborne geophysical targets within an area of favourable geology.

The stratigraphic sequence, assumed ages, and probable thicknesses of geologic units are taken from previous work by Templeman-Kluit of the G.S.C. Unit 2, the schists, and Unit 3, the phyllites, were mapped and subdivided in detail during the 1972 exploration season.

Unit 2

In the Foto Group area, Unit 2 consists of a medium to coarse grained quartz biotite garnet schist with variable porphyroblasts of staurolite and andalusite. Porphyroblasts are generally subhedral to euhedral, 1 mm. to 7 mm. in size, and commonly in bands paralleling the major foliation S_2. Sericite (muscovite) grains are silvery-grey to cream coloured, less than 1 cm. in size and generally parallel to S_2. Biotite occurs as large dark brown to black grains predominantly parallel to a later foliation than S_2. All evidence of bedding in this unit has been obliterated by the complex deformational history but since it is more highly metamorphosed than the adjacent phyllites, it is thought to be older. True stratigraphic thickness is unknown due to intense minor folding but it is estimated that the schist is over 3000 ft. thick in this area.

The quartz mica schist (Unit 2d) occurs in a north-south band roughly 2000-3000 ft. wide along the eastern portion of the claim group. Although its contact with the Cretaceous

granodiorite was only observed in one locality, contacts with the batholith are very sharp with little thermal effect in evidence. The schist-intrusive contact appears to be sub-vertical. The conformable contact with the "phyllites" to the west is characterized by a decrease in deformation shown by a decrease in grain size and absence of porphyroblasts. This gradational contact generally occurs over 10 to 100 ft. This contact appears to be related to a change in metamorphism rather than a change in chemical composition and is, therefore, thought to be roughly paralleling the S_2 foliation.

The major structural element is the north-south striking and moderate to steeply westerly dipping S_2 foliation. Small folds with amplitudes generally less than 2 cm. are likely related to the D_2 deformation. The absence of major folds common in this unit in other areas within the Anvil Range possibly indicates this region was subjected to weak D_3, D_4 and D_5 deformations. Although very few measurements were taken, post D_2 biotite growth is likely related to the D_4 deformation.

Unit 3

The phyllites, Unit 3, are subdivided into 3 major rock types, quartz-rich phyllite (3a) the lower member, non-quartz-rich phyllite (3b), the middle member, and limy phyllite (3c) the upper member. Greenstone (3d) occurs as lenses throughout this section. This phyllite series probably represent an original silty shale regionally metamorphosed up to a green-schist facies. The "greenstones" are likely of volcanic origin. Original bedding is present in areas of low metamorphism but in most cases is obliterated by D_2 deformation producing the well developed S_2 surfaces. Later deformations are indicated by well formed lineations and small to large scale folds. Due to easy erodability the phyllites are poorly exposed, thus limiting mapping of structural detail. Size comparison of

individual mica grains was used to differentiate fine grained schists and phyllites. Under a hand lens, no individual mica grains can be observed in the phyllite. The upper phyllite member (3c) has not been found within the Foto Group area.

Unit 3a - consists of a well-foliated quartz sericite, biotite, chlorite, graphite phyllite. Colour varies according to predominance of mica and graphite content. Quartz and mica are segragated and form alternating folia generally less than 1 cm. thick. Thickness of the quartz-rich folia generally is in proportion to the total amount of quartz present and often contains minor pale green chlorite. Alternating darker folia consisting of mica generally are thinner and can contain a combination of muscovite, biotite, chlorite or graphite. Sericite rich phyllite predominates and has a silvery-grey sheen on mica-rich folia parallel to S_2. Green colouration generally reflects high chlorite content, dark brown indicates biotite and black phyllite usually is graphite rich. The quartz rich phyllite generally consists of over 50% quartz in hand specimen and has a conformable contact with the underlying quartz biotite-sericite schist. Overall thickness of this unit is variable, depending on amount of folding, but is thought to be 800-1500 ft.

Two distinct and favourable sulphide host rock types occur within the quartz rich phyllite paralleling the predominant structure S_2. A band of white to light grey quartzite with phyllitic partings was noted between lines 8S and 24N on the Foto Grid. Probable thickness varies between 100 and 200 ft. A larger band of black quartz graphite phyllite located between lines 16N and 64N is estimated to be over 500 ft. thick. It is important to note that these two units are generally found associated with massive sulphide deposits in this region. Quartz graphite phyllite is found around and within all three major deposits. Quartzite

appears to be the direct host for the sulphides and has a very limited extent beyond the sulphide bodies at Faro, Vangorda and Swim.

Structurally, S_2 predominates with later deformations producing lineations on S_2 surfaces or forming S_2 into large open folds. Small (less than 1 inch) F_2 folds are outlined by S_1 quartz rich laminae. F_2 folds generally strike at 30-40 degrees and plunge 25 degrees in that direction. The S_2 foliation is very constant, striking between 350 and 20 degrees and dipping 40 to 80 degrees west. The strong lineation trending at 110 degrees is parallel to the prominent L_4 noted throughout the Swim-Anvil belt. The L_3 lineation trending at 150 degrees is generally very faint and obscure.

Unit 3b - consists of sericite, chlorite and graphite phyllite with minor quartz content. Compositionally, micas and graphite make up 50 to 80 percent of the unit, quartz and calcite comprise less than 30 percent. Individual folia of aligned micas are much thinner than those of Unit 3a. Colouration is due to prominence of mica, i.e. sericite phyllite appears silvery-grey, chlorite phyllite is pale green and graphite phyllite is black. The major foliation S_2 is well developed and since low quartz content decreases competence, many F_2 isoclinal folds, as well as D_3 and D_4 crenulations and lineations, are present. Generally this unit weathers recessively leaving many small and sparse outcrops throughout the district. For this reason many large folds probably remain undetected. The S_2 foliation strikes 330 to 10 degrees and dips at an average of 40 degrees to the west. The S_2 foliation appears to curve and trend northwest between lines 40N and 56N along baseline 0+00.

Greenstone, Unit 3d, occurs throughout the phyllite section. Greenstone is found as small lenses of Unit 3a, in Units 3b and 3c large tabular greenstone bodies several hundred feet thick are found. The greenstone is more resistant to weathering than the enclosing phyllite and consequently may form the more prominent exposures. The greenstone is a fine grained amphibolite made up of fine grained actinolite and minor chlorite, epidote, plagioclase and calcite. Rough alignmnent of actinolite crystals parallel to S_2 gives the greenstone a distinct linear grain.

The greenstone bodies generally have well-foliated margins with coarser grained massive centres. Field terms such as "chlorite schist" or "actinolite schist" have been used to describe the foliated variety, whereas "amphibolite" describes the more massive type. Coluration varies from pale green well foliated chlorite rich schist to dark green amphibolite. Locally, the greenstone may contain pale green laminated, tuffaceous looking material. Carbonate content ocurrs as pinkish to creamy calcite and interstitial fillings between amphibolite grains as well as distinct fine bands parallel to the S_2 foliation. Lenses of crystalline calcite are rare. The greenstone likely represents extrusive andesite and volcanic tuffs.

So far, mapping has only delineated two small occurrences of greenstone. Outcrops were discovered at line 13S, 55E and Line 40N, 9W, consisting of chlorite schist, the typical marginal assemblage of major greenstone bodies.

Unit 11

Quartz monzonite to granodiorite rocks form a large intrusive body to the east of the Foto claims. Limited mapping was done within the batholith since it post-dates major sulphide mineralization

in the Anvil Area. Much of the intrusive consists of a pale grey, medium grained, porphyritic biotite quartz monzonite to granodiorite.

ECONOMIC GEOLOGY

No surface exposures of lead-zinc mineralization have been discovered to date, although the Foto Group has not yet been fully mapped or prospected. Minor sporadically disseminated pyrite was found in quartz graphite phyllite between lines 48N and 64N.

LINECUTTING

Over 80 line miles of picket-line was contracted by Eastern Associates Ltd., Yukon. The grid consists of east-west trending cross-lines of 800 ft. spacing, controlled by north-south baselines every 3000 ft. Picket stations were chained every 100 ft., slope corrections were made in areas of steep topography. Final grid control was surveyed by stadia methods during the gravity survey.

TOPOGRAPHY AND GROUND CONDITIONS

The eastern and central portion of the Foto Group covers a moderate westerly-facing slope. The western portion of the property lies within the broad and near-flat Blind Creek valley. Much of the northwestern and southern areas are covered with considerable amounts of fluvial-glacial material. Gravel banks over 100 ft. thick are not uncommon where local creek erosion has created such exposures. Most tributaries of Blind Creek are westerly flowing, although a few drainages flow to the northwest following major fault structures. No permafrost was encountered. Vegetal cover consists of caribou moss and good spruce growth.

GEOCHEMICAL SURVEYS

Soil Sampling Survey

Soil samples were taken at 200 ft. station intervals on grid lines east of baseline zero. Roughly one-quarter pound of either 'B' or 'C' horizon soil was packaged in Kraft sample sacks and forwarded for analysis to Bondar-Clegg's Laboratory in Whitehorse. Each sample was dried, sieved to -100 mesh, weighed to 0.5 grams, digested in hot aqua regia and analyzed for lead and zinc by atomic absorption.

Probably as a result of thick overburden conditions, very little geochemical response was obtained from soils collected. No large anomalous zones occur, although a few sporadic soil sample "highs" occur within the grid area.

Rock Geochem Survey

In the east-central portion of the grid area where outcrop density is over 10 percent, rock samples were collected for Pb,Zn, rock geochemical analysis. Individual samples sent to Bondar-Clegg in Whitehorse weighed between one-quarter and one pound. All samples were crushed, screened to -100 mesh, weighed to 0.5 grams and analyzed for lead and zinc by atomic absorption. All results have been plotted on the Grid Geology Map.

To develop possible Pb-Zn rich trends and to aid in identification of stratigraphic horizons favourable to mineralization, a summary of average background lead-zinc values for typical rock units has been prepared.

	Average Value	
Rock Unit	Pb/ppm	Zn/ppm
2d	10	80
3as	12.7	86.7
3ag	10.2	85
3aq	18.8	89.5
3b	15.6	95.3

From the limited rock geochem sampling to date, the quartzite appears to be slightly higher in lead than other surrounding units. The schist contains slightly less lead and zinc than the phyllite. No conclusive results have yet been derived from rock geochem studies in this area.

GEOPHYSICAL SURVEYS

Ground Magnetometer Survey

A ground magnetometer survey was carried out to locate and define aeromagnetic anomalies obtained from a helicopter-borne aeromagnetic survey. All grid lines were surveyed with readings taken at 100 ft. station intervals.

A Sharpe MF-1 magnetometer was used, the instrument is hand held and measures the vertical magnetic component by use of an oil-dampered fluxgate which automatically levels itself in the vertical direction. Gamma values can be directly read from the instrument. Prior to the actual magnetometer survey, readings were taken along the base lines at cross line intersection points. These stations were looped and re-read every hour as a means of controlling drift and diurnal variations. With established base stations, a rapid and precise check was kept on a relative basis during day to day operation. All cross lines were read and re-checked at base stations within every hour as a means of checking magnetic variations.

Magnetic results were corrected for both diurnal changes and drift then plotted on a grid plan at a scale of 400 ft. to 1 inch. All data has been contoured and profiled.

Four major anomalies were defined. One well-defined and regular gradient is located between lines 24N and 48N from 10W to 30W, and is possibly due to a larger body of greenstone.

It is similar in character and calculated magnetic susceptibility to magnetic responses obtained over other known greenstone bodies. The three other anomalies centred at line 48S, 30E; 144N, 60W; and 192N, 20W, are coincident with gravity and Turam response and are likely related to pyrrhotite mineralization.

Turam Electromagnetic Survey

A contract for 60 line miles of Turam survey was completed by Seigel Associates Ltd. of Vancouver. The Turam method was used for the electromagnetic survey because of its deep penetration capabilities and allowance for more accurate interpretation of anomaly characteristics. The following "Description of Method and Instrumentation" and "Presentation of Results" has been derived in part from a report prepared by Seigel Associates.

"Description of Method and Instrumentation

Electromagnetic methods detect massive sulphide bodies by measuring the secondary electromagnetic field produced by eddy currents induced in such bodies by a transmitted or primary electromagnetic field. The Turam method employs a large closed loop of wire as transmitter; the field strength ratio and phase difference are measured by means of two receiver coils at two nearby observation points.

The presence of a subsurface conductor is indicated by abnormal field strength ratios and phase differences. Typically, anomalies show a correspondence between positive values of the field strength ratio and negative phase differences.

A Scintrex SE-71 instrument was employed for the survey. The receiver coil separation was 100'. Eighteen transmitting loops of the following dimensions were utilized:

2000' x 2400'	(1 loop)
1500' x 3200'	(2 loops)
3000' x 3200'	(10 loops)
3000' x 4000'	(5 loops)

The locations of their leading edges are shown on Figure 8.

An energizing frequency of 400 Hz was generally employed, though readings were also taken at 200 Hz on some lines. Readings were taken every 100' along thirty-five lines oriented east-west."

"Presentation of Results

The results of the present survey are presented in Figure 8 (Sheets 1 and 2) on the uniform scale of 1"= 400'. Sheet 1 contains the data measured over L-88 N - L-208 N inclusive; Sheet 2 contains the data over L-64 S - L-80 N inclusive. The Reduced Ratios and Phase Differences have vertical scales of 1"= 20% and 1"= 10^{o} respectively.

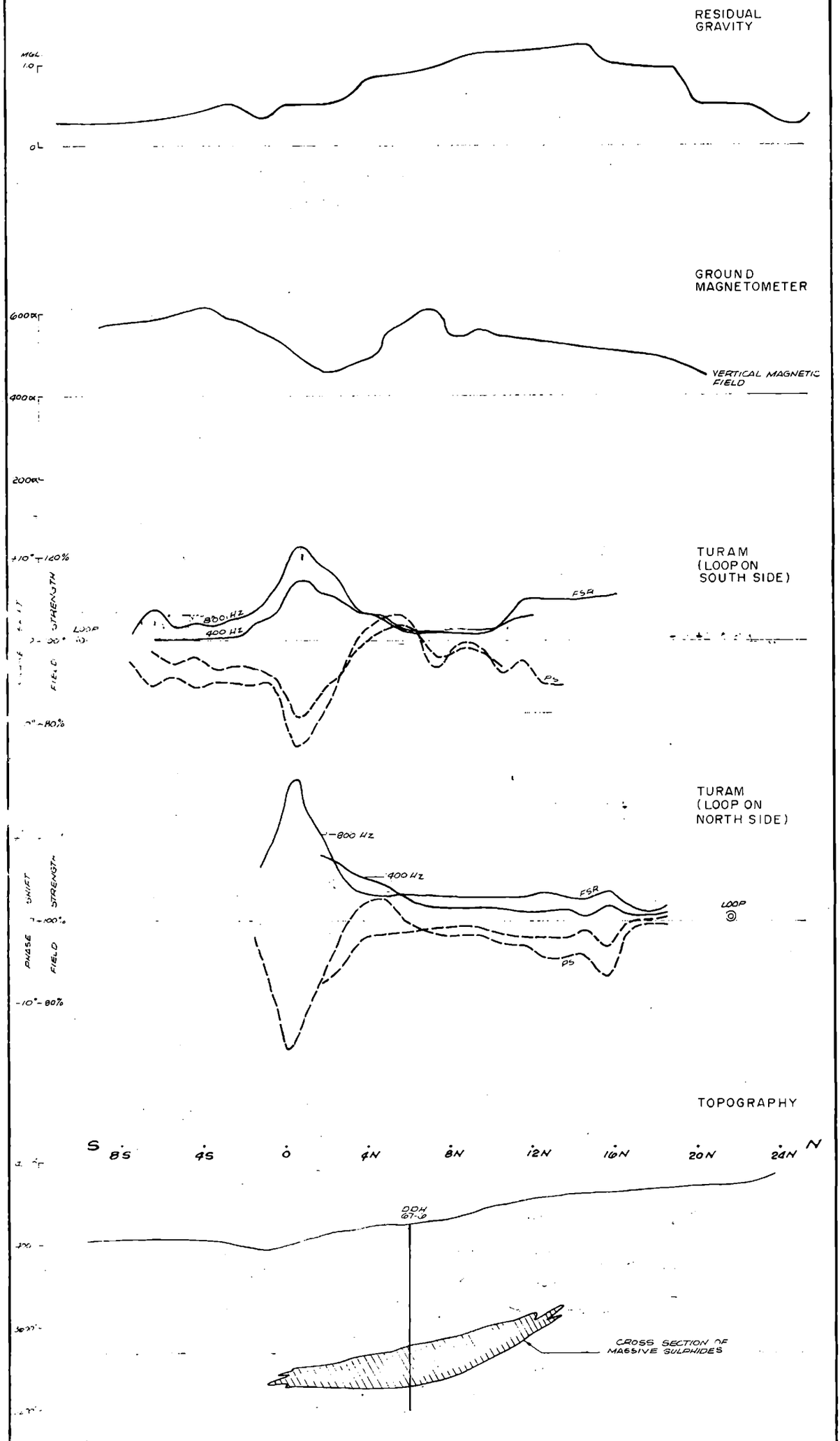
Where anomalous field distortion occurs on the electromagnetic profiles the location and depth of the main current flow has been derived from the curve shapes. This location is noted on the profile sheets by a circle at the appropriate point. Anomalies have, where feasible, been connected between lines to obtain the projection of the current pattern. These "conductor axes" are chosen on the basis of depth values and other characteristics of the elctromagnetic curve.

Conductivity X thickness ($\sigma\tau$) values have been determined where possible. Highly conducting bodies (massive sulphides or graphite) generally have high $\sigma\tau$ values (> 100 mhos). Poorly conducting bodies (overburden, etc.) usually have low $\sigma\tau$ values (< 10 mhos).

To facilitate the final evaluation of the geophysical data the electromagnetic distortions are classified as Weak, Moderate or Strong. Strong anomalies are first priority exploration targets and are represented by well defined conductors of good conductivity. Weak anomalies, on the other hand, are generally poorly defined and are, on the basis of the geophysical data, of questionable merit."

Discussion of Results

Anvil Mining Corporation undertook several electromagnetic test surveys over the deeper sections of the Faro No. 3 deposit to determine which method had the most effective depth penetration and ability to define deeply buried massive sulphides.



FARO No. 3 DEPOSIT

GEOPHYSICAL PROFILES AND TURAM TEST SURVEY

DDH 67-6

LOCATION LINE 48 W

Depth to the top of the deposit is between 500 and 600 ft. The tests indicated that large vertical loop and 'shootback' techniques were not suitable while Turam methods gave good results. Anomalous response indicating poor to moderate conductivity was registered over the edges of the deposit, a typical near flat-lying conductor. Although the 800 Hz frequency gave better response, it is recommended that 400 Hz be used to eliminate geologic noise. Insert "Faro No.3 Deposit, Line 48W" demonstrates Turam results over the Faro No. 3 Deposit.

A major zone of discontinuous conductors trends roughly north-south along the eastern border of the Foto Group. In the northern region the accurate conductor pattern resembles a folded conductive rock unit. Seigel has recommended that zones within this area warrant additional exploratory attention. Turam results were, therefore, relied upon for selection of priority areas for gravity survey coverage.

The overall conductor pattern is probably related to quartz graphite phyllite, host for massive sulphide deposits in the Anvil area. All major anomalies have been designated with a bracketed letter and tabulated with selected peak locations, (conductivity) X (thickness) and depth ranges. Table I, summarizing the Turam results, has been prepared by Seigel Associates.

"Conclusions and Recommendations" have been derived from the Seigel Turam Report as well.

> "Several anomalous electromagnetic responses were observed within the Foto Grid. These are delineated on Plate 1 (Sheets 1 and 2) by appropriate conductor axes, zonal designations, etc.

Several of the zones (of generally weak-moderate conductivity) appear to be distributed along a major arcuate structure which is interpreted to be a major fold striking north-south.

All of the anomalous zones observed within the area warrant additional exploratory attention. Of particular interest of course are those exhibiting relatively high conductivity X thickness ($\sigma\tau$) products which reflect relatively high conductivity material. Initial exploratory attention should be paid to such zones.

It is recommended that the present electromagnetic results be carefully correlated with the known geology, geochemistry, mineral occurrences and geophysics (magnetics, etc.) of the Foto property. Subsequent decisions on the relative merits of the various anomalies would be subject to such correlation.

In order to respond to electromagnetic survey techniques sulphide bodies must exhibit conductivities many times higher than normal rocks. This may require as much as 25% of volume of sulphide mineralization. Such bodies are termed "massive sulphides". It is possible therefore that mineralized bodies which do not fall into the "massive sulphide" specification may lie undetected within the present survey grid."

TABLE I

Anomaly	Selected Peak Locations	σt & Depth Ranges	Comments
(A)	L-24 N; 55 E (117%; -5°) L-40 N; 48 E (120%; -7°) L-64 N; 43 E (122%; -11°)	5 - 20 mhos; 160 - 300 ft.	Strike N 25° W to N 10° W. More than 5000' long. A generally well defined clean anomaly. The double-peaked effect on some profiles suggests more than one conductor. The dip is likely grid E. Moderate conductivity - probably electronic conductor (sulphides or graphite).
(B)	L-120 N; 14 + 50 E (120%; -10°) L-136 N: 11 + 50 E (118%; -10°) L-152 N; 11 + 50 E (119%; -5°)	3 - 8 mhos 150 - 250 ft.	Strikes NS to N 15°W - arcuate and convex grid E. Converges with Anomaly C on L-160 N. Double peaked reflecting two conducting horizons 150 - 200 ft. apart. Likely dipping grid E. Well defined strong amplitudes. Moderate conductivity - probably electronic conductor (sulphide or graphite)
(C)	L-144 N; 20 + 50 E (130%; -8°) L-160 N: 10 + 50 E (141%; -4°)	3 - 50 mhos 150 - 250 ft.	Strikes about N 25° W. Very well defined with strong amplitudes. Converges with B on Line 160 N. Double-peaked at some intersections. Conductivity excellent on L-160 N, moderate elsewhere. Again likely dips grid E.

Anomaly	Selected Peak Locations	σ & Depth Ranges	Comments
(D)	L-184 N; 3 W (119%; -4°) L-192 N: 15 + 50 W (119%; -2°)	30 - 80 mhos. 200 - 400 ft.	Apparently an excellent conductor - sulphides or graphite. Probably northwest continuation of Anomalies B and C. Multiple conductor
(E)	L-176 N; 56 + 50 W (123%; -5°) L-192 N; 43 W (113%; -2°)	17 - 25 mhos. 350 ft.	Multiple conductivity. Apparently moderate - good conductivity but poor definition. Possibly the continuation of zones B - C and D.
(F)	L-114 N; 87 + 50 W (120%; -2°) L-144 N; 68 + 50 W (116%; -3°) L-160 N; 76 + 50 W (122%; -2°) L-168 N; 69 W (128%; -3°)	20 - 200 mhos. 200 - 300 ft.	Probably SW continuation of Anomaly E and same series of conductors. Multiple peaks suggesting several conducting horizons. Strong ratios, weak phase differences. Apparent conductivities are excellent suggesting electronic conduction - grpahite or sulphides. Likely dips grid west.
(G)	L-160 N; 45 W (115%; +1°) L-168 N; 46 W (128%; -3°)	17 - 100 mhos. 200 - 225 ft.	Multiple conductor. Good conductivity. Well defined on L-168. Apparently dips grid E. Interesting Anomaly in view of its apparent isolation and excellent geo-electric properties.

Anomaly	Selected Peak Locations	σt & Depth Ranges	Comments
(H)	L-200 N; 55 W (109%; -5°)	6 mhos.	Possibly part of Zone E. Multiple conductor poorly defined. Moderate conductivity. Open grid N and NW.
	L-208 N; 51 + 50 W (109%; -7°)	350 ft.	
(J)	L-152 N; 23 + 50 W (116%; -2°)	20 mhos.	Single line occurrence. Good definition. Good Conductivity
(K)	L-136 N; 11+ 50 W (108%; -6°)		Multiple poorly defined conductors. No reliable depth and conductivity estimates possible
(L)	L-48 S; 4 + 50 W (120%; -8°)	20 - 25 mhos. 250 - 300 ft.	Good conduction on L-48 S (sulphides or graphite). Possibly two conductors as shown. Several conductors of secondary importance nearby. Open to the south.
(M)	L-34 S; 49 + 50 E (121%; -3°)	100 mhos. 150 ft.	Strong single peak, excellent σt value. May extend NW to L-24 S and L-40 S. Shallow.
(N)	L-56 S; 39 + 50 E (93%; +5°)		Group of reversed Anomalies. Possibly a large flat conductor, (eg. swamp). Definition good.
	L-64 S; 48 + 50 E (110%; +6°)		
(P)	L-48 S; 68 E (104%; -3°)	-	Weak ratios and strong phase response indicating poor conduction.
	L-56 S; 66 + 50 E (105%; -5°)		

Anomaly	Selected Peak Locations	σt & Depth Ranges	Comments
(Q)	L-16 S: 15 + 50 W (89%; -2°)		Reversed ratios, normal phase differences. Possibly resulting from a combination of loop location and conductor attitude of residual interest.
(R)	L-64 N; 18 + 50 E (106%; -8°)	2 mhos. 100 ft.	Single point occurrence. Well defined conductivity. Shallow.
(S)	L-8 S; 47 + 50 E (107%; -6°)	13 mhos. 160 ft.	Fair anomaly on L-8 S. Moderate conductivity. Single line occurrence.

Gravity Survey

A gravity survey, designed to evaluate major Turam conductors on the Foto Claims, was contracted to Airborne Geophysical Surveys Limited of Calgary, Alberta. Excerpts from a report by geophysical consultant, R. B. Galeski, follows, pages 17 to 23.

Introduction

Field work on the Foto claims was conducted during the months of August and September, 1972. Fly camp, supplies, air support, communications and direction were provided by Dynasty Explorations, Ltd. Airborne Geophysical provided gravity meter, survey instruments and a three man crew consisting of meter operator, surveyor and rodman.

Programme consisted of about 50 miles of east-west lines and north-south tie lines. Line spacing was 800' for the most part, and station spacing was 200' Surface elevation decreased across the area in a WSW direction from a high point in the northeast portion of the area to a low point in the southwest corner. Maximum elevation range is 1300'±. Local undulations are present in the generally uniformly westerly dipping surface. Most prominent of these is in the west-central part of the area where there is 120' of relief to the east.

Accompanying this report are the following maps:

Station location

Elevation

Bouguer gravity

Residual gravity

Bouguer Map

Bouguer values were calculated in a normal manner using an elevation correction factor of 0.06 (corresponding to a surface rock density of approximately 2.7). The Bouguer map, contoured at a 0.5 mgal. interval, indicates an ENE regional gradient across the area - counter to surface slope. This suggests that the elevation correction factor of 0.06 is too low. Indeed, in the east-central and northeast portions of the area a factor of 0.064 (surface density of 2.35) would flatten the regional. Even local surface features in these areas do yield gravity changes when the 0.06 factor is used. So it is possible that the bulk of the rocks forming the areas of higher elevation in the east-central and northeast parts are less dense than 2.7. However, this is not the case in the rest of the area, where normal bedrock of 2.7 density does exist.

Most local flexures on the map are not readily apparent. A few exist in the east-central and northeast portions over topographic and other features. A regional low, with a local positive within it, exists on line 60E between 24S and 34S. Most prominent is a strong nosing between 40S and 48S on 30E. These

and others have been isolated on the residual map and analyzed. They are described in the following section.

Residual Map

Bouguer values and elevations were plotted in profile form. These profiles accompany this report. On prints of the profiles, smoothed Bouguer lines were run. Regionals were also run, tied and adjusted. The residual map accompanying this report represents a contoured presentation of the difference values between smoothed Bouguer and regional. Contour interval is 0.1 mgal. It should be noted that the Bouguer values were smoothed to remove very sharp, small, near-surface effects; and the regional (subtracted from Bouguer) is designed to remove very deep-seated effects. The regional will also include (and remove from Bouguer) very gradually-changing near-surface features. What are left in the residual are shallow gravitational changes caused by density changes from masses having rather abrupt edges. The residual map should be used with care at the limits of data acquisition as regional values (and hence residual values) are under poor control in these areas.

On the residual map, every local positive indicates the presence of a mass which is heavier than surrounding rocks. The mass may be a bedrock topographic high covered by overburden. It may be an injected dike or a local, vertically oriented heavy layer in a metamorphic sequence. It may be a greenstone lens. Or it may be a mass of heavy mineralized material. In evaluating the various positives, the writer relies primarily on amplitude and flank gradient. It should be noted that sulphide accumulations have been found in this region beneath positives as small as 0.5 mgal. On the other hand, some positive anomalies over 1.0 mgal. in amplitude have not been associated with mineralization.

Below is a list of positives of moderate interest. Most are relatively low in amplitude, and causative masses are ill-defined. They are potentially economic if they coincide with other geophysical or geological leads. Order of listing is geographical and it does not bear on relative merit.

1.	5W on 192N	0.35 mgal	open to northeast
2.	14W on 168N	0.5 mgal.	end of line
3.	40W,14W and 6E on 32N	0.4 mgal.	single line
4.	38E on 24N	0.7 mgal.	open to southeast
5.	21E on 24S	0.45 mgal.	gentle gradient

6.	43E and 24S	0.58 mgal.	gentle gradient
7.	16W on 40S	0.6 mgal.	end of line
8.	6W on 48S	0.56 mgal.	gentle gradient.

Following are the prime anomalies in the prospect lettered consecutively in order of importance.

A.- (intersection of lines 40S and 30E). 1.28 mgal. amplitude. Causative mass 800' x 2400' in areal extent and 110' thick. Maximum depth to top 235'. In relatively uniformly sloping terrain where topographic effects should not exist. Surrounding negative areas are narrow.

A'- Build-up of 0.86 mgal. at 6E on line 48 suggests an associated feature to A may exist south of 48S.

B- (24E on lines 120N and 128N). 1.6 mgal. amplitude from the minimum to the southwest. Causative mass, dipping northeasterly, is 1800' x 3000' in areal extent. Based on surface density of 2.7 and causative mass density of 3.6 thickness is 150' and maximum depth to top is 270' at up-dip edge.

Because this anomaly lies in an area of possible surface density of 2.35 line 120N was recom-

puted with an elevation correction factor of 0.064. The anomaly still appears, but with lesser flank gradient. It was isolated, and computations were made under an assumption of a 0.35 density contrast (i.e. thick overburden of 2.35 to 2.7 bedrock). With a causative bedrock mass of 2.7 and 2.35 overburden, we get maximum depth to top of about 400' and thickness of 400'. Therefore, unless some other geologic information indicates otherwise, it is not too unreasonable to conclude that the B anomaly may be related to a change in rock type rather than to the presence of massive sulphides.

C.- (46E on line 40S) 0.78 mgal. 1000'x 2500' areal extent and thickness of 70'. Maximum depth to top at up-dip edge is 190'. Causative mass trends NE-SW and dips SE. Graded third because of moderate amplitude.

D.- (26S on line 60E) 0.81 mgal. On small, sharp feature located in a regional low. Maximum depth to top of causative mass is 150', thickness 70'±. This anomaly is seen on only one line. It may be related to C.

E.- (30E on line 40N to 23E on line 64N). A lengthy, low-relief (0.6 mgal.) positive, probably extending beyond line 24N. Steep eastern flank suggests west tip. Computed depth to top is 150', thick ness 50'.

F.- (43E on line 72N) 0.8 mgal. amplitude, Downgraded because of gentle flanks.

CONCLUSIONS AND RECOMMENDATIONS

The Foto Mineral Claims are located over sections of north-south trending quartz-rich phyllite and quartz-mica schist units similar to the host rocks for massive sulphide deposits in the Anvil Area.

Well defined exploration targets have been outlined through defining coincident gravity, magnetic and electromagnetic anomalies over sections of quartz-rich phyllite.

It is recommended that further exploration consist of drill testing geophysical targets as well as completion of Turam and gravity coverage over yet unsurveyed sections of the Foto Claim Group.

PROPOSED 1973 EXPLORATION PROGRAM

(1) Contract approximately 50 line miles of linecutting. Due to swamp and soft ground conditions over some low elevation areas of the property, linecutting should be done in late spring before break-up. not in 73

(2) Complete approximately 50 miles of ground magnetometer and Turam over unsurveyed portions of the claim group. not in 73

(3) Complete 1972 proposed gravity coverage (15 miles) includes the following lines: L56S, 64S, 8N, 16N, 40N, 136N, 152N, 160N, 168N, 176N, 184N and 192N. ✓

Further 20 miles of gravity contingent on Turam and magnetometer results on grid extension. not in 73

(4) Road building and fuel transportation to start well before "break-up". Road building to provide access ✓

for geophysical crews using tracked vehicle support and track-mounted diamond drill equipment.

(5) Drill 5 major targets and possibly 3 contingent holes. Total estimated footage is 4100 ft. Tabulated descriptions of drill targets and sketches with geophysical profiles follow in the text of this report. ✓

(6) Total estimated budget approximately ~~$130,000~~ $80,000 – 162,000.

Respectfully submitted,

W. J. Roberts,
Staff Geologist

January, 1973

PROPOSED DIAMOND DRILL PROGRAM FOTO CLAIMS

Hole No.	Grid Location	Angle	Proposed Depth	Target
73-F-1	Line 40S Stn. 30E	-90°	500 ft.	(1) Gravity Anomaly of 1.28 mgal. amplitude, causative mass calculated to be 800 x 2400 ft. in areal extent and 110 ft. thick, maximum depth to top = 235 ft. Target is over relatively uniformly sloping terrain where topographic effects should not exist (2) Magnetic Anomaly 240 gammas, peak response coincident with gravity anomaly. (3) Turam Conductor weak response, possible interference from loop positioned at Stn. 28E. Response at station 40E and 14E, typical representation of edges of flat-lying sheet coincident with gravity anomaly. (4) Soils Geochem weak lead-zinc anomaly downslope from main geophysical anomalies but coincident with easterly edge of anomalies.
73-F-1-C (Contingent)	Line 40S Stn. 46E	-90°	300 ft.	Contingent on results from Drill Hole 73-F-1 (1) Gravity Anomaly "C" of 0.78 mgal. amplitude, causative mass calculated to be 1000 x 2500 ft. in areal extent and 70 ft. thick, maximum depth to top (up-dip) edge is 190 ft. Causative mass trends NE-SW and dips SE. (2) Magnetic Anomaly north flank of 100 gammas plus anomaly. (3) Turam Conductor on strike with strong single peak conductor, excellent (conductivity) x (thickness) value (100 mhos), depth calculated to be 150 ft.

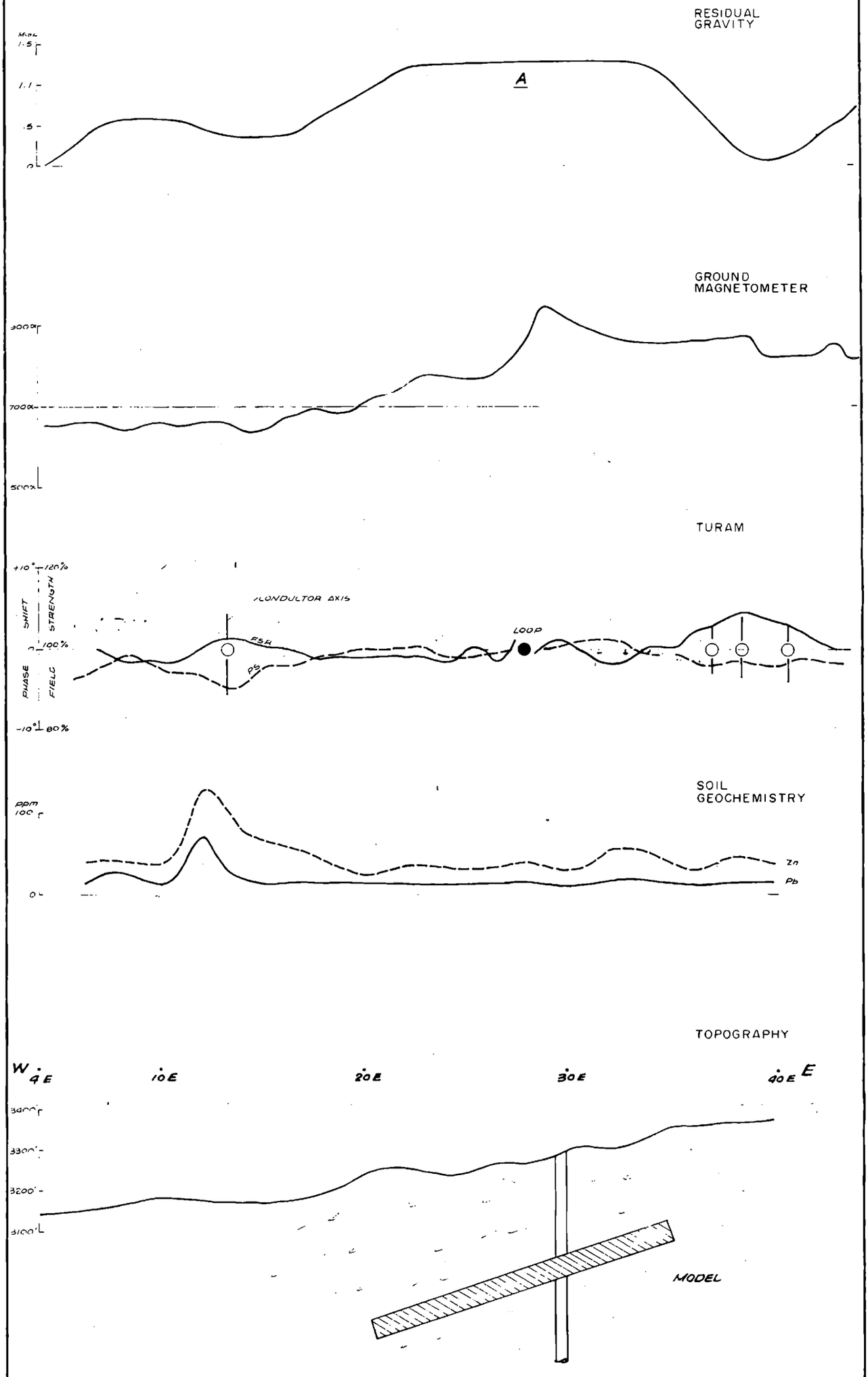


FOTO GROUP

GEOPHYSICAL PROFILES AND PROPOSED DRILL HOLE

73 - F - 1

LOCATION LINE 40 S
STN 30+00 E

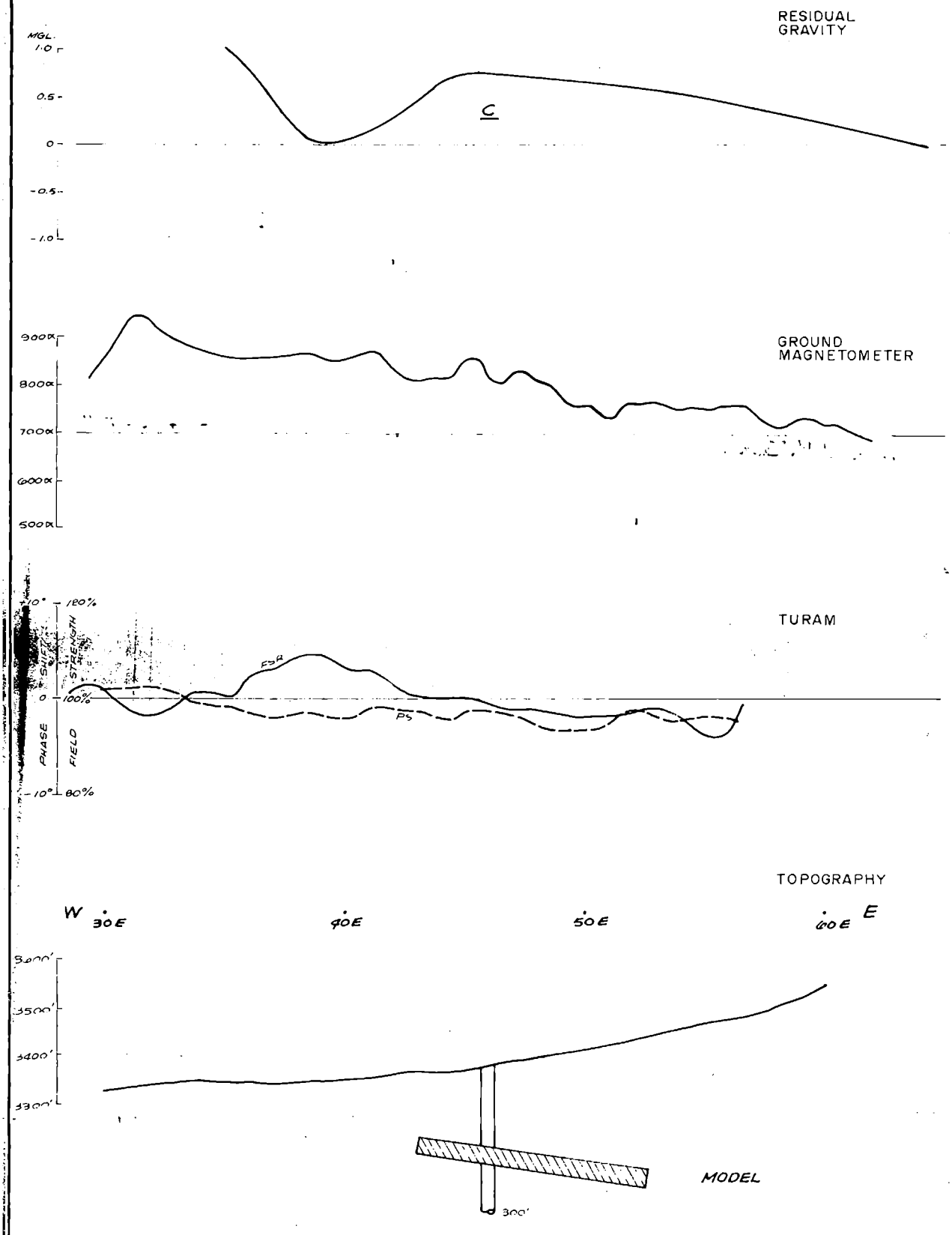


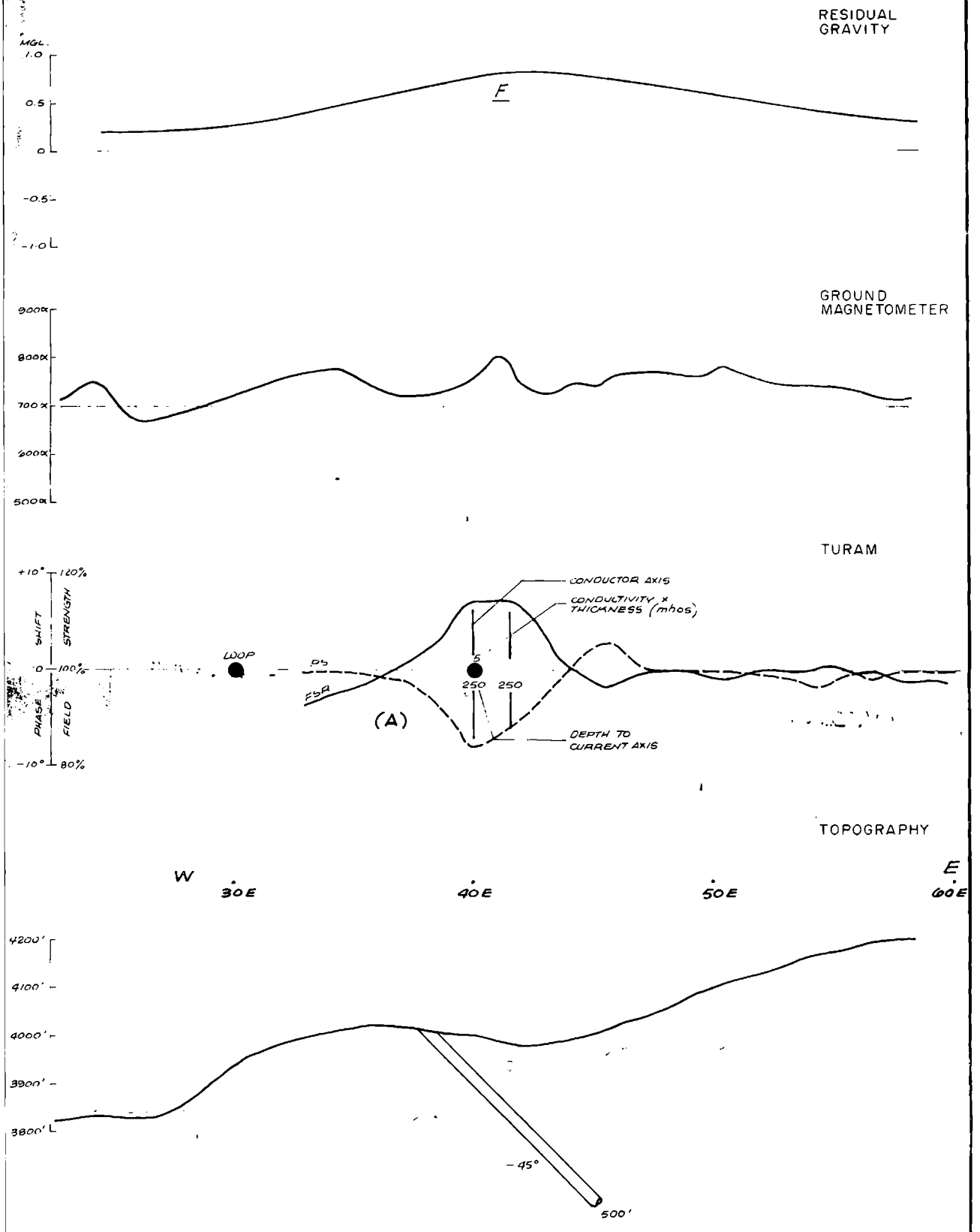
FOTO GROUP

GEOPHYSICAL PROFILES AND CONTINGENT DRILL HOLE

73-F-IC

LOCATION LINE 40 S
STN 46+00 E

Hole No.	Grid Location	Angle	Proposed Depth	Target
73-F-2	Line 72N Stn. 38+00E	-45°E	500 ft.	(1) Gravity Anomaly 0.8 mgal. amplitude peak at station 43E, line 72N. (2) Magnetic Anomaly 100 gammas coincident with gravity anomaly and Turam conductor. (3) Turam Conductor on strike with double peaked conductor, (thickness) x (depth) -20 mhos, depth to conductor 160-300 ft. Probably electronic conductor (sulphides or graphite)
73-F-2C (Contingent)	Line 64N Stn. 50+00E	-90°	500 ft.	Contingent on results from Hole 73-F-2 (1) Gravity Anomaly on strike with 0.8 mgal. gravity peak. (Anomaly F). (2) Magnetic Anomaly 130 gammas coincident with gravity anomaly E. (3) Turam Conductor Turam conductor (A) adjacent on the west. Minor cross over to the east. Indicative to near flat-lying conductor below 50+00E.
73-F-3	Line 128N Stn. 22+00E	-90°	800 ft.	Priority Target (1) Gravity Anomaly 1.6 mgal. amplitude from minimum to the southwest. Causative mass, dipping northeasterly is 1800 x 3000 ft. in areal extent. Calculated to be 150 ft.thick and maximum depth to top is 270 ft. Peak at 24+00E on line 120N and 128N. (2) Magnetic Anomaly 200 gamma anomaly is coincident with residual gravity anomaly B. (3) Turam Conductor two strong Turam conductors (B) and (C) coincident with gravity. Typical strong response from flat-lying conductor. Conductor often double peaked, probably electronic (graphite or sulphides) (thickness) x (conductivity) 3-5 mhos, depth to conductor 150-200 ft. (4) Soils Geochem weak geochem "high" on downslope side of gravity-magnetic coincidence.



0 400 800
SCALE IN FEET

FOTO GROUP

GEOPHYSICAL PROFILES AND PROPOSED DRILL HOLE

73 - F - 2

LOCATION LINE 72 N
STN 38+00 E

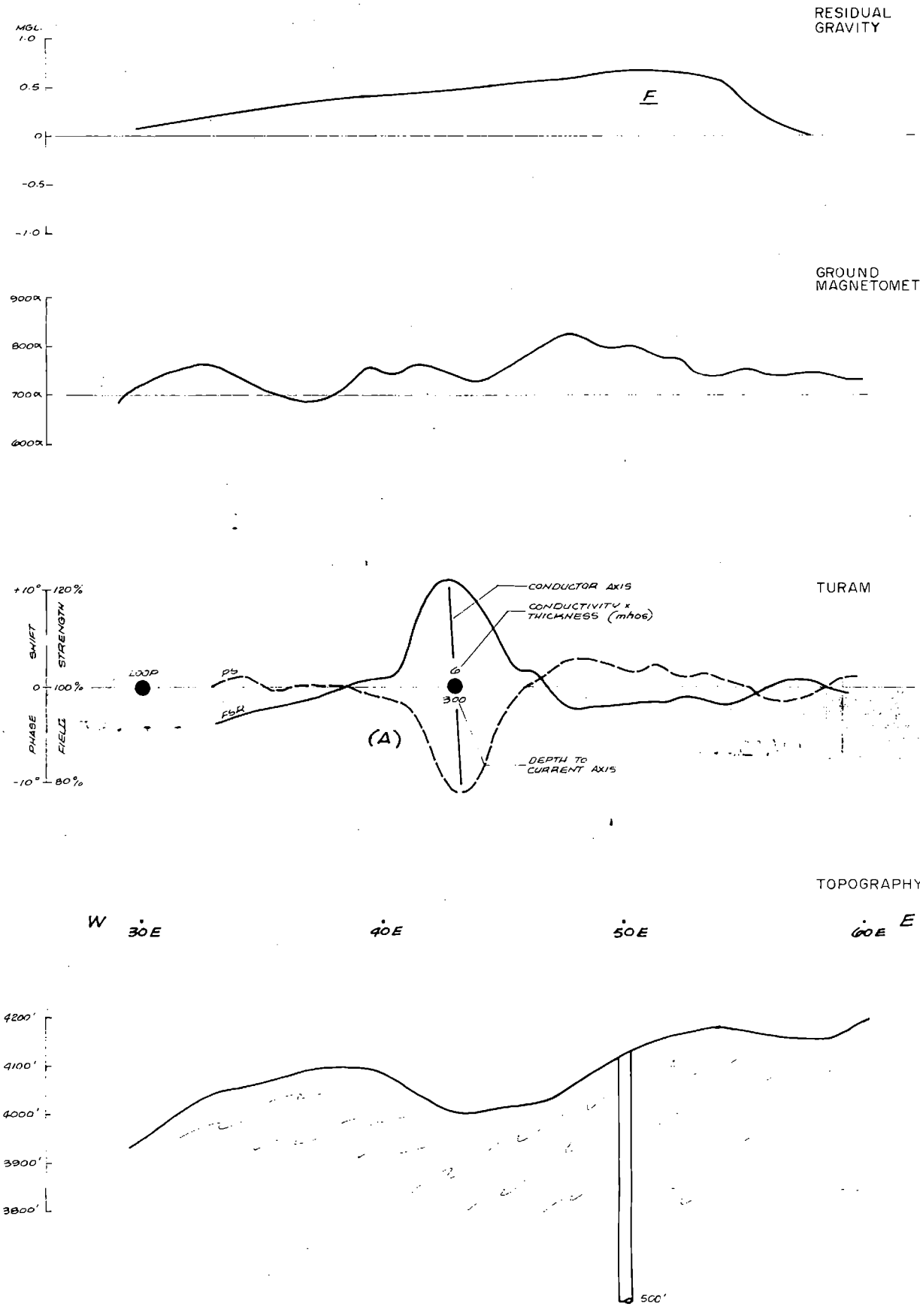


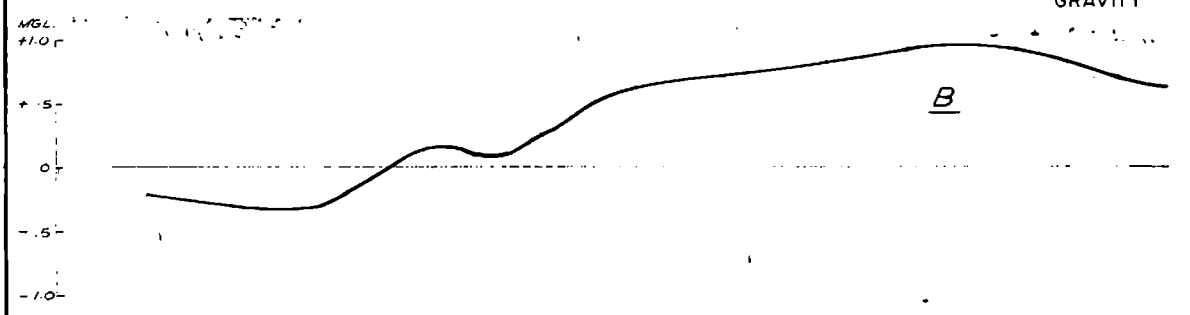
FOTO GROUP

GEOPHYSICAL PROFILES AND CONTINGENT DRILL HOLE

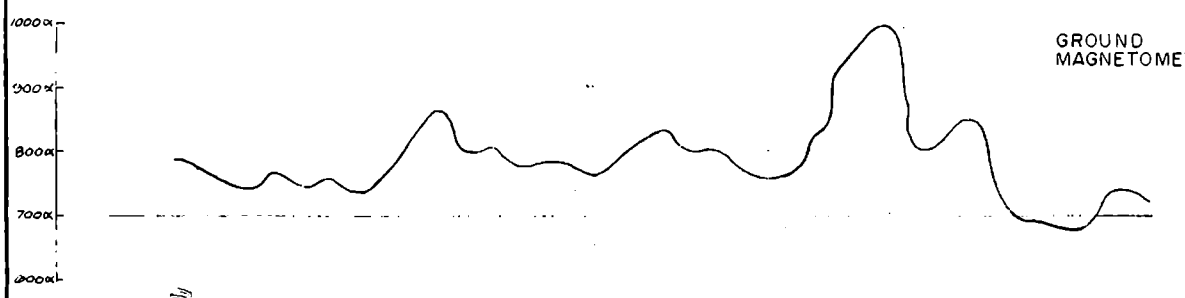
73 - F - 2C

LOCATION LINE 64 N
STN 50+00 E

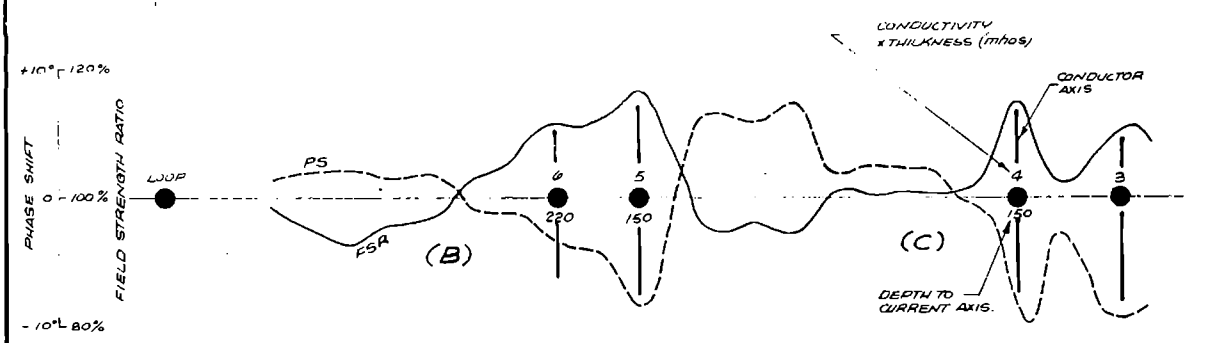
RESIDUAL GRAVITY



GROUND MAGNETOMETER

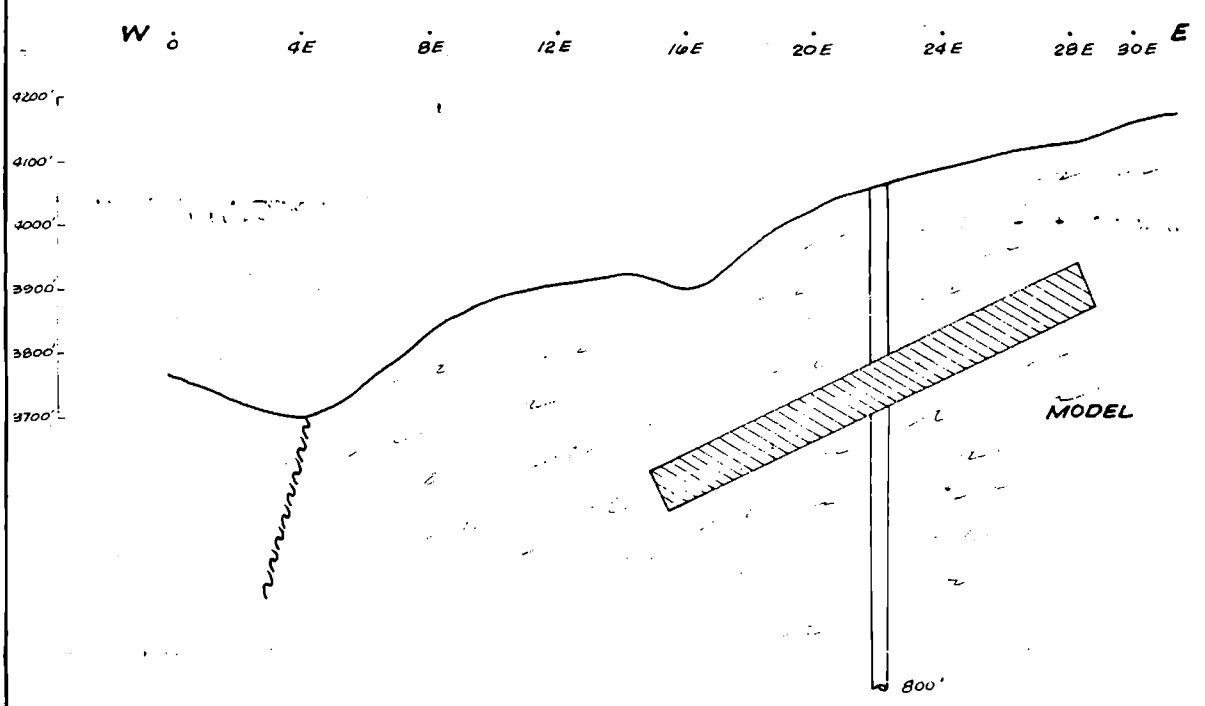


TURAM



SOIL GEOCHEMISTRY

TOPOGRAPHY



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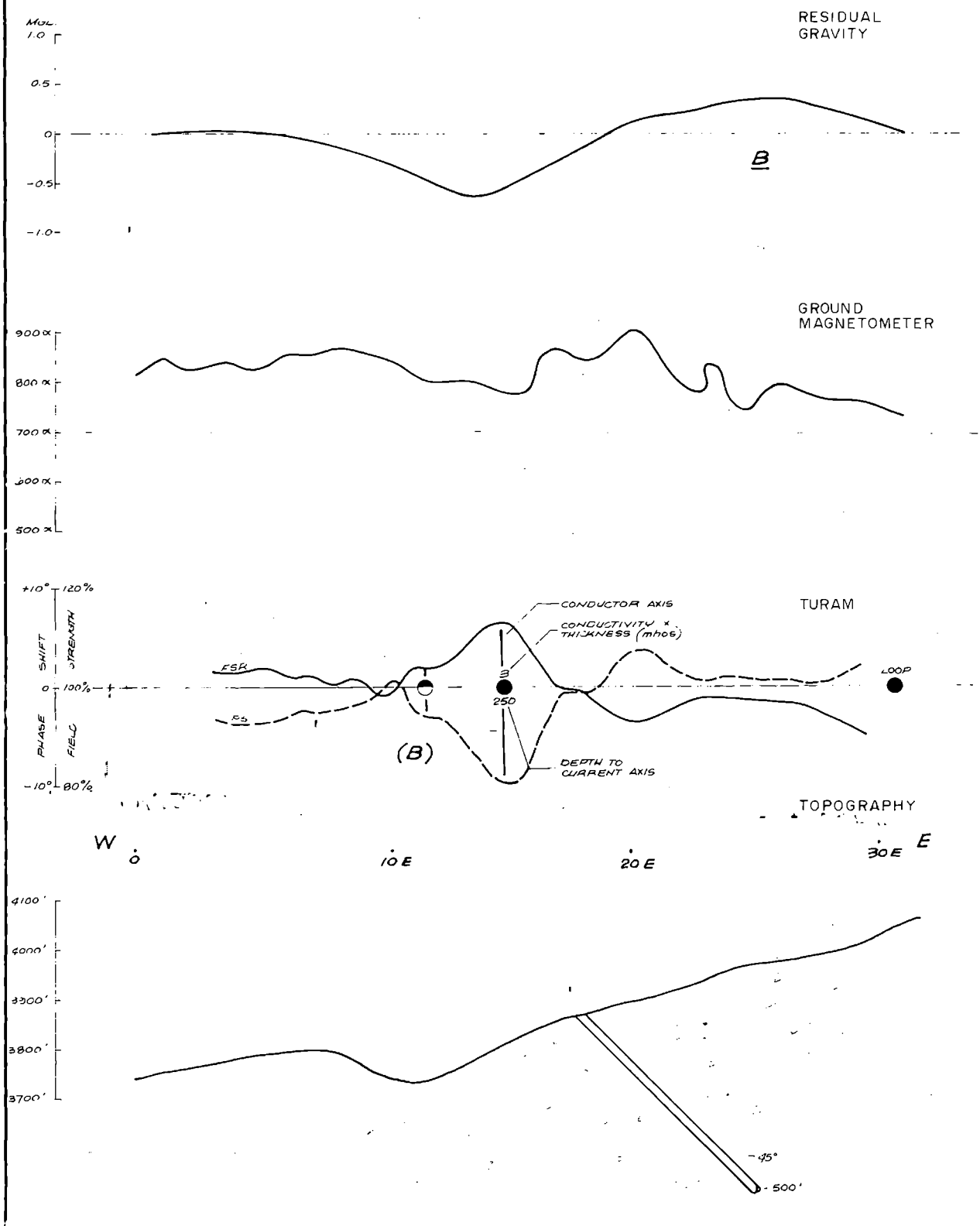
SCALE IN FEET

FOTO GROUP

GEOPHYSICAL PROFILES AND PROPOSED DRILL HOLE

73 - F - 3

LOCATION LINE 128 N
STN 22+00 E



0 400 800
SCALE IN FEET

FOTO GROUP	
GEOPHYSICAL PROFILES AND CONTINGENT DRILL HOLE	
73 - F - 3C	
LOCATION	LINE 112 N STN 18+00 E

Hole No.	Grid Location	Angle	Proposed Depth	Target
73-F-3-C (Contingent)	Line 112N Stn. 18+00E	-45° Bearing 060°	500 ft.	Contingent on results from Hole 73-F-3 (1) Gravity Anomaly along steep gradient of residual anomaly B described above. (2) Magnetic Anomaly 100 gamma magnetic anomaly on flank of gravity anomaly B. (3) Turam Conductor Turam anomaly (B) adjacent on the west and described above. (Conductivity) x (thickness) = 3 mhos, depth 250 ft.
73-F-4	Line 152N Stn. 14+00E	-90°	500 ft.	(1) Gravity Anomaly +.5 mgal. positive on strike to northwest of major gravity anomaly B. (2) Magnetic Anomaly small 30 gamma magnetic anomaly coincident with gravity and Turam. (3) Turam Conductor Major multi-peaked, electronic conductor, (thickness) x (conductivity)= 5-50 mhos Depth 150-250 ft. All three anomalies coincident. Strikes N25°W, has well defined strong amplitudes, converges with conductor (C) at line 160N.
73-F-5	Line 192W Stn. 14+00W	-60° Bearing 270°	500 ft.	Hole 73-F-5 to be drilled upon completion of additional gravity survey coverage supporting present gravity data. (1) Gravity Anomaly small residual anomaly to the east, survey coverage incomplete to date. (2) Magnetic Anomaly 300 gamma magnetic anomaly coincident with N-NE trending Turam conductor. (3) Turam Conductor N-NE striking conductor, (conductivity) x (thickness) 30-80 mhos, depth 200-400 ft., an excellent conductor - sulphide or graphite.

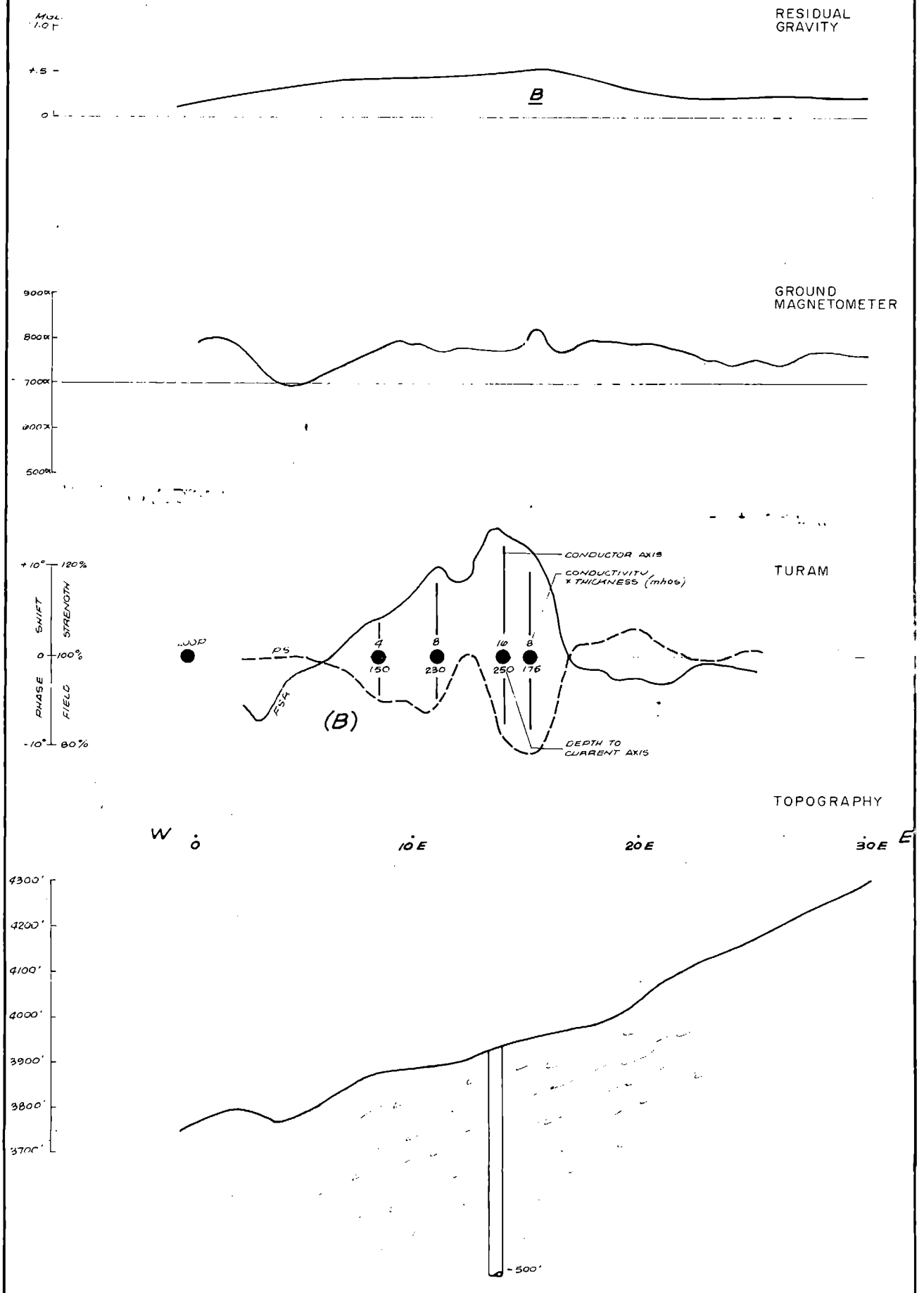


FOTO GROUP

GEOPHYSICAL PROFILES AND PROPOSED DRILL HOLE

73-F-4

LOCATION LINE 152 N
STN 14+00 E

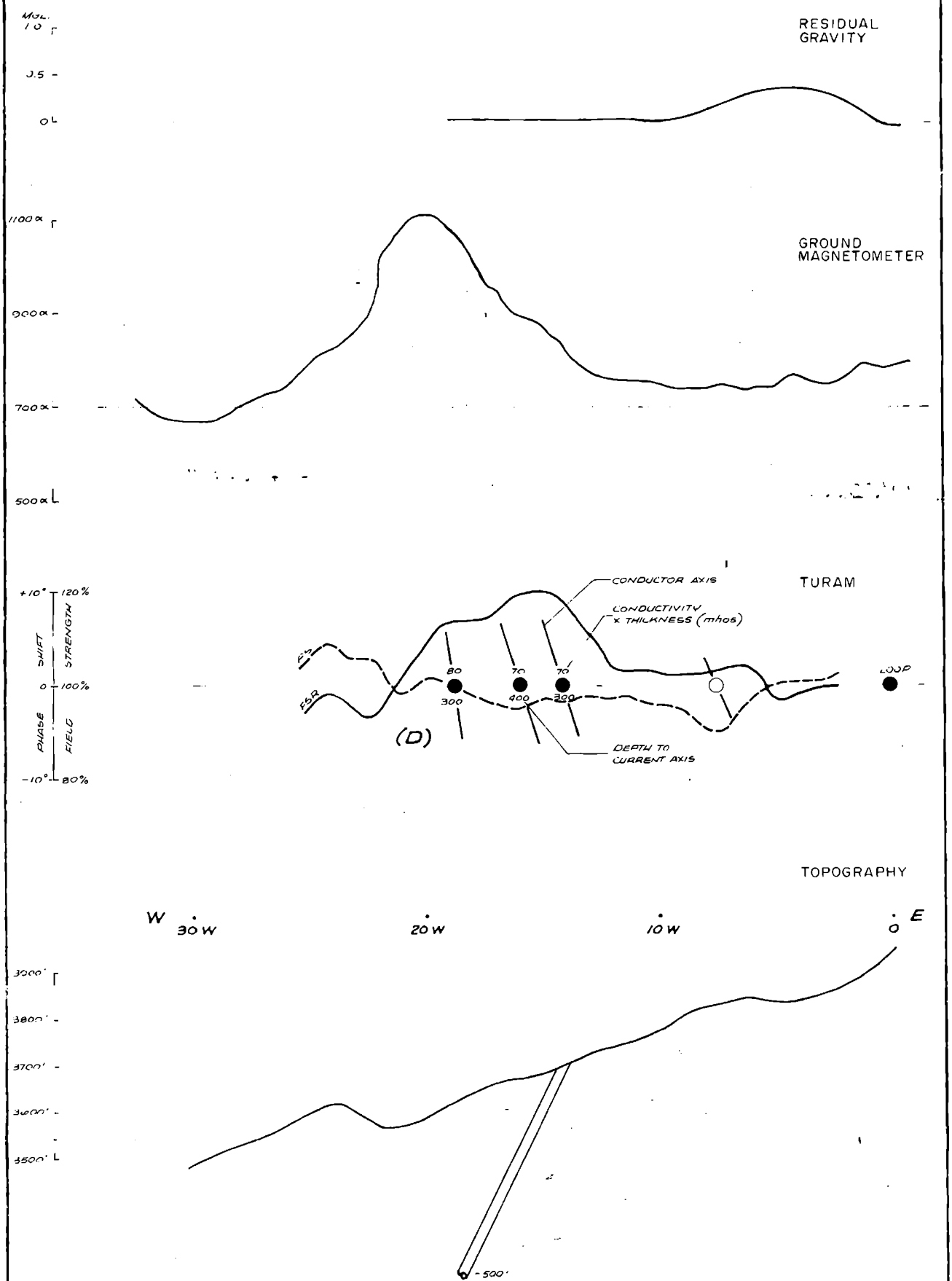


FOTO GROUP

GEOPHYSICAL PROFILES AND PROPOSED DRILL HOLE

73 - F - 5

LOCATION LINE 192 W
STN 14+00 W

Airborne Geophysical Surveys Ltd.
Calgary ——— Alberta

#600, 330 - 9TH AVE. S.W.
CALGARY, ALBERTA T2P 1K7
PHONE 403 - 264-3434

November 30th, 1972

Mr. J. Brock,
Dynasty Explorations Ltd.,
330 - 355 - Burrard St.,
Vancouver, B.C.

John:

re: Your proposed drill hole 73-F-2 on the Foto Group (stn. 38E on line 72N).

It appears that you are attempting to test a narrow Turam anomaly and gravity anomaly F with one slant hole. Note that this gravity anomaly has been down-graded in my report because of its gentle flanks (and a not too robust amplitude). If it means mineralization at all, it would be rather deep; and the 500' slant hole may bottom above it.

I would suggest you consider this primarily a Turam anomaly and put the 500' of drilling straight down at about 40E or 41E on line 72W. This will come close enough to the gravity axis to be a proper test.

Yours very truly,

Bob

R. B. Galeski

DYNASTY EXPLORATIONS FOTO CUB LAKE 105-K-2

DYNASTY ..... CLAIM ..... AREA ..... LOCATION ..... N.T.S. .....

Claim No.	Grant No.	No. of Claims	Staked by	Recording Date	Transfer Information To	Transfer Information Date	Due Date	Assessment Work and Remarks
1-8	Y66390-Y66397	8	N. Welter	June 9/72	Dynasty	July 31,1972	June 9/76*	*Northern Mineral Grant
9-16	Y66398-Y66405	8	J.F. Welter	June 9/72	"	"	June 9/76*	Date: May 23, 1973
17-24	Y66406-Y66413	8	A. Osinchuk	June 9/72	"	"	June 9/76*	Amount: $ 65,922.97
25-32	Y66414-Y66421	8	R. Prusak	June 9/72	"	"	June 9/76*	Type: Geol. Geophy. Geochem.
33-40	Y66422-Y66429	8	L. Pennings	June 9/72	"	"	June 9/76*	
41-48	Y66430-Y66437	8	J. White	June 9/72	"	"	June 9/76*	
49-56	Y66438-Y66445	8	A. Leaberry	June 9/72	"	"	June 9/76*	
57-64	Y66446-Y66453	8	S. Dobson	June 9/72	"	"	June 9/76*	
65-72	Y66454-Y66461	8	M.A.Jensen	June 9/72	"	"	June 9/76*	
73-80	Y66462-Y66469	8	N. Lawrick	June 9/72	"	"	June 9/76*	
81-88	Y66470-Y66477	8	K. Milan n	June 9/72	"	"	June 9/76*	
89-96	Y66478-Y66485	8	K. Bullough	June 9/72	"	"	June 9/76*	
97-104	Y66486-Y66493	8	M. Duhamel	June 9/72	"	"	June 9/76*	
105-112	Y66494-Y66501	8	M. Green	June 9/72	"	"	June 9/76*	
113-120	Y66502-Y66509	8	F. Hinger	June 9/72	"	"	June 9/76*	
121-128	Y66510-Y66517	8	B. Hinger	June 9/72	"	"	June 9/76*	
129-136	Y66518-Y66525	8	J. Romfo	June 9/72	"	"	June 9/76*	
137-144	Y66526-Y66533	8	D. Romfo	June 9/72	"	"	June 9/76*	
145-152	Y66534-Y66541	8	W. Richardson	June 9/72	"	"	June 9/76*	
153-160	Y66542-Y66549	8	S. Henderson	June 9/72	"	"	June 9/76*	
161-168	Y66550-Y66557	8	B. Jones	June 9/72	"	"	June 9/76*	
169-176	Y66558-Y66565	8	S. Jones	June 9/72	"	"	June 9/76*	
177	Y66566	1	E. Jonathan	June 9/72	"	"	June 9/75*	
178	Y66567	1	E. Jonathan	June 9/72	"	"	June 9/76*	
179	Y66568	1	E. Jonathan	June 9/72	"	"	June 9/75*	

COMPANY ..DYNASTY.....CLAIM ...FOTO..... AREA ...CUB LAKE..... LOCATION ..... N.T.S. ...105-K-2.....

Claim No.	Grant No.	No. of Claims	Staked by	Recording Date	Transfer Information To	Transfer Information Date	Due Date	Assessment Work and Remarks
180	Y66569	1	E. Jonathan	June 9/72	Dynasty	July 31,1972	June 9/76*	
181	Y66570	1	E. Jonathan	June 9/72	"	"	June 9/75*	
182	Y66571	1	E. Jonathan	June 9/72	"	"	June 9/76*	
183	Y66572	1	E. Jonathan	June 9/72	"	"	June 9/75*	
184	Y66573	1	E. Jonathan	June 9/72	"	"	June 9/76*	
185-192	Y66574-Y66581	8	C. MacIntosh	June 9/72	"	"	June 9/75*	
193-196	Y66582-Y66585	4	J. Johnson	June 9/72	"	"	June 9/75*	
197-200	Y66586-Y66589	4	J. Johnson	June 9/72	"	"	June 9/76*	
201-208	Y67061-Y67068	8	Peter Vikre	Aug. 29,1972	"	Dec. 4, 1972	Aug. 29/76	
209-216	Y67069-Y67076	8	B. Waugh	Aug. 29, 1972	"	"	Aug. 29/76	
217-224	Y67238-Y67245	8	Peter Lane	Sept. 27,1972	"	"	Sept. 27/76	